

Correspondence

Fetal brain waves and personhood

SIR

In an interesting essay, Professor Thomasine Kushner has recently attempted to show that the fetus has a life worthy of protection when fetal brain waves can be detected, ie at about eight weeks of gestation (1). Kushner's argument is a refinement of that found in a submission to the *New England Journal of Medicine* by Dr J M Goldenring (2). In his contribution Dr Goldenring suggests that medical science can indeed stipulate the point where human life begins. Given that 'brain death' has been accepted as the point where human life ends, logic would suggest that since 'brain life' indicates the emergence of a functioning brain, brain life should be considered the point when human life begins.

Kushner supports Goldenring's thesis on the basis that the initiation of brain activity is, a) among the options for establishing the point when human life begins and b) because of the connection of brain activity with the possibility of consciousness and the connection of the latter concept with what we take to be valuable about the notion of life (3). Kushner emphasises that what is significant about the onset of fetal brain waves is that the fetus in addition to being merely biologically alive, now 'has a life' and can be the subject of experiences (3). As Kushner states:

'... The important point is that until the infant has developed a brain capable of consciousness it is impossible for such personal development to occur. Conversely, once a human fetus has developed a brain capable of consciousness its biography - its life in the sense of *bios* - has begun. Thenceforth it has the capacity to be a

person and its moral importance rests on that fact (3).'

Given the moral significance of fetal brain waves, Kushner concludes that after their onset the fetus is owed certain moral and legal protections (3).

If Kushner and Goldenring's interpretation of the significance of fetal brain waves is correct, much progress in the controversy surrounding the abortion issue will have been made. Instead of endless debates regarding the moral significance of the *potential* (4) of the fetus to grow into a person with a full set of rights, we could establish the personhood of the fetus on the basis of characteristics it possesses in *actuality*. That is, we could refer to a specific, ascertainable fact that indicates that the fetus is an *actual* person and has the same claim to protection as any adult. Unfortunately, the argument is far from being conclusive. The problem is that it is not clear that adult and fetal brain waves signify the same thing. *Adult brain waves are morally significant because and only because their presence is associated with what we value in life - the capacity for self-knowledge, to communicate, etc.* As Kushner states, these qualities include:

'... being the *subject* of a certain life with its accompanying history, nexus of personal and social relationships, complex patterns of psychological characteristics, plus the whole fabric of events as they happen to and affect the individual. Subjects of lives, in this sense, are capable of some degree of problem-solving, effecting relationships that give satisfaction, benefitting from past experiences to influence present situations as well as being capable of experiencing and expressing a range of emotions ... (3).'

The possession of these human capacities is what valuable life consists of, and the criterion for when someone has lost these capacities has changed over time. Science has narrowed the

search for the organ(s) whose function is absolutely necessary for human, as opposed to merely biological, life. It is now evident that the fully developed brain is 'truly unique and irreplaceable' with respect to these capacities. The crucial issue is, however, whether or not the occurrence of fetal brain waves signifies, as it does in the adult, the possession of the valued faculties or merely the *potential to develop* these faculties. For fetal brainwaves to signify the same thing as they do in the adult, the fetus at eight weeks of gestation would have to have the same capacities as the adult.

Kushner's discussion is ambiguous on this important point, stating both that at the onset of brain waves the fetus is the subject of a life and that it has a *developing capacity* for being such a subject (4). In a revealing passage Kushner addresses the fact that though the nervous system is the first to start developing, it is the last system to complete development:

'Only gradually in fetal and then infant development does he or she acquire the characteristics of personhood. The process of becoming a person is a lengthy one and even at birth the infant has only some of the necessary psychological attributes such as desires, wants, frustrations and feelings. It will take time for the more complex sets of capacities referred to earlier to develop in the course of interaction between the infant and his environment (5).'

The problem for Kushner and Goldenring is therefore that far from being 'logically suggested' by the brain death criterion, the argument that human life begins with fetal brain waves would only succeed if the fetal brain were *fully developed* at the time of the onset of brain waves (6). What actually seems to be the case, however, is that the onset of fetal brain waves is an indication that the fetus is developing

normally and has the *potential* to grow into an adult with the attendant capacities.

It seems therefore that we are back at the old abortion controversy referred to earlier – ie does the fact that the fetus has the potential to develop into an adult confer on it any rights? After Goldenring and Kushner's analysis we are clearly aware of the facts that: 1) brain waves are in certain contexts morally and legally significant and 2) the fetus has brain waves at roughly eight weeks. These authors wrongly conclude, however, that the presence of brain waves signifies the same thing in the case of the fetus as it does in the adult. Their argument is in reality another manifestation of the potentiality/actuality controversy, and no matter how much one may agree with its conclusion, the argument adds nothing to the debate. If the traditional debate over the moral significance of the fetal potential to grow into a moral agent were to be resolved, there would be no need for this argument. If on the other hand that debate is not resolved, their argument will remain inconclusive.

References and footnotes

- (1) Kushner T. Having a life versus being alive. *Journal of medical ethics* 1984; 10: 5–8.
- (2) Goldenring J M. *New England journal of medicine* 1982; 307: 564.
- (3) See reference (1): 6.
- (4) Noonan J, ed. *The morality of abortion*. Cambridge, Mass: Harvard University Press, 1970.
- (5) See reference (1): 7.
- (6) Warren M A. On the moral and legal status of abortion. *The monist* 1973; 57: 1. It may be thought that the phenomena of sleeping adults or adults in temporary coma may constitute a counter-example to the distinction proffered in this essay. That is, such individuals have rights and yet only have the *potential* to manifest valued capacities such as self-knowledge, the ability to follow rules, etc. The distinction can still be maintained, however, between an entity that has certain dispositions but cannot manifest them presently and an entity that only potentially has certain dispositions.

GARY E JONES
Philosophy Department
University of San Diego

Singer and Kuhse on the potential of embryos

SIR

In replying to Singer's and Kuhse's response to my article 'The Moral Status of Embryos (1)', I will rely on the following points about potential:

1. There are degrees of potential.
2. Therefore, if A has the potential to become C, and B has the potential to become C, there is a sense of 'potential' in which it does not follow that A and B have the same potential.
3. Differences in degree of potential are important in various ways, including morally.

These points may be obvious, but I doubt that Singer and Kuhse would have replied to me as they did if they had kept them in mind. Nevertheless, a consideration of their adaptation of one of my cases illustrates all three points. Singer and Kuhse say:

'Montgomery's army has the potential to defeat Rommel's army. So Bill Sykes, Bob Smith, Tom Jones . . . [the list continues until every soldier has been named] . . . together have the potential to defeat Rommel's army.

This claim is plainly true (2)'.

Let us modify history. Montgomery is put in command of an untrained and undisciplined rabble. Against the pessimism of his staff he says 'these men have the potential to defeat Rommel's army'. He trains them, and, when he has turned them into a formidable army, utters precisely the same words, this time to general agreement. He puts his claim to the test of battle and is proven correct. Does the rabble have the same potential as the trained army? Yes, in the sense that the end-state, the defeat of Rommel's army is the same. No, in the sense that they are not equally close to realising, or equally likely to realise, that potential. That such differences are strategically important is obvious. They are also morally important. The trained army has military responsibilities which the rabble lacks, and the rabble has a right to military protection which the trained army lacks.

With these preliminaries aside I now turn to deal with the claim that I have overlooked a straightforward way of understanding what Singer and Kuhse

wrote. I will show that it is not straightforward and does not help their cause in the least. The passage to be interpreted follows. I have lettered and italicised the sections where the suggested gloss might be applied.

'Everything that can be said about the potential of the embryo can also be said about (A) *the potential of the egg and sperm*. (B) *The egg and sperm if united*, also have the potential to develop into a normal human being, with a high degree of rationality, self-consciousness, autonomy and so on. On the basis of our premise that (C) *the egg and sperm separately* have no special moral status, it seems impossible to use the potential of the embryo as a ground for giving it special moral status (3)'.

The gloss offered by Singer and Kuhse is as follows:

'In the crucial paragraph dealing with the potential of the egg and sperm, we had in mind, the egg and sperm when separate but considered jointly(2)'.

This gloss has no simple and univocal application. I think that the natural place for applying it is at (A) where it yields this result:

Everything that can be said about the potential of the embryo can be said about the potential of the egg and the sperm when separate but considered jointly.

This is obviously false when one takes into account the fact that there are degrees of potential. All of the following have the potential to develop into intelligent adults: an egg, a 16-cell zygote, a 24-week fetus, an infant, a three-year-old, a 15-year-old. Do they have the same potential? Yes, in the sense that the end-state is the same. No, in the sense that they are not all equally close to realising or equally likely to realise that potential. The sense which yields the negative answer is morally important as the military example showed.

The artificiality of the gloss is obvious when it is applied to the phrase 'the egg and sperm if united' which occurs at (B). This phrase is incapable of being understood in the sense of 'separate but considered jointly'. Rather 'the egg and sperm if united' just is the embryo (I follow Singer and Kuhse in not distinguishing between zygotes and embryos).

The passage marked (C) becomes 'the egg and sperm separately but